

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A multi-layer substrate for a low noise block down converter, comprising:

an antenna pattern conveying an electric wave signal carried along a waveguide,

at least ~~two~~ a first and a second ground conductive layers stacked on said antenna pattern with a dielectric layer therebetween,

wherein, in at least one of said ~~at least two~~ first and second ground conductive layers, a conductor is absent in at least part of a region that is closer to said waveguide than said antenna pattern is.

2. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 1, wherein, in at least one of said ~~at least two~~ first and second ground conductive layers, said conductor is absent in a region directly below said antenna pattern.

3. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 2, further comprising:

~~three~~ a third ground conductive layers, wherein, in the same level as that in which one of said first and second ground conductive layers ~~from above~~ is provided, a said dielectric layer is provided in a region that is closer to said waveguide than said antenna pattern is and, in the same level as

that in which a said third ground conductive layer ~~from above~~ is provided, a notch is provided in a region directly below said antenna pattern.

4. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 2, further comprising:

a third ~~three~~ ground conductive layers, wherein, in the same levels as those in which said first and second ground conductive layers ~~from above~~ are provided, a said dielectric layer is provided in a region that is closer to said waveguide than said antenna pattern is.

5. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 2, wherein a waveguide aperture is formed penetrating said at least ~~two~~ first and second ground conductive layers and said dielectric layer and, in all of the same levels as those in which said at least ~~two~~ first and second ground conductive layers are provided, said conductor is provided around said waveguide aperture.

6. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 5, further comprising:

~~three~~ a third ground conductive layers, wherein, in a said third ground conductive layer ~~from above~~, a notch is provided in a region directly below said antenna pattern.

7. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 5, further comprising:

~~three~~ a third ground conductive layers, wherein, in the same level as that in which one of said first and second ground conductive layers ~~from above~~ is provided, a said dielectric layer is provided in at least part of a region that is closer to said waveguide than said antenna pattern is.

8. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 5, wherein, in at least two of said at least ~~two~~ first and second ground conductive layers, said conductor is absent in at least part of a region that is closer to said waveguide than said antenna pattern is.

9. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 8, further comprising:

~~three~~ a third ground conductive layers, wherein, in the same level as that in which said first ground conductive layer ~~from above~~ is provided, a said dielectric layer is provided in at least part of a region that is closer to said waveguide than said antenna pattern is and, in a said third ground conductive layer ~~from above~~, a notch is provided in at least part of a region directly below said antenna pattern.

10. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 8, further comprising:

~~three~~ a third ground conductive layers, wherein, in the same level as that in which one of said first and second ground conductive layers ~~from above~~ is provided, a said dielectric layer is provided in at least part of a region that is closer to said waveguide than said antenna pattern is and, in a said third ground conductive layer ~~from above~~, a notch is provided in a region directly below said antenna pattern.

11. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 8, wherein, in at least two of said at least ~~two~~ first and second ground conductive layers, said conductor is absent in a region directly below said antenna pattern.

12. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 11, further comprising:

~~three~~ a third ground conductive layers, wherein, in the same level as that in which one of said first and second ground conductive layers ~~from above~~ is provided, a said dielectric layer is provided in at least part of a region that is closer to said waveguide than said antenna pattern is and, in a said third ground conductive layer ~~from above~~, a notch is provided in a region directly below said antenna pattern.

13. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 11, further comprising:

~~three~~ a third ground conductive layers, wherein, in the same levels as those in which said first and second ground

conductive layers ~~from above~~ are provided, a said dielectric layer is provided in at least part of a region that is closer to said waveguide than said antenna pattern is.

14. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 1, wherein a waveguide aperture is formed penetrating said at least ~~two~~ first and second ground conductive layers and said dielectric layer and, in all of the same levels as those in which said at least ~~two~~ first and second ground conductive layers are provided, said conductor is provided surrounding an entire periphery of said waveguide aperture.

15. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 14, further comprising:

~~three~~ a third ground conductive layers, wherein, in the same level as that in which one of said first and second ground conductive layers ~~from above~~ is provided, a said dielectric layer is provided in at least part of a region that is closer to said waveguide than said antenna pattern is and, in said third ground conductive layer ~~from above~~, a notch is provided in at least part of a region directly below said antenna pattern.

16. (currently amended) The multi-layer substrate for the low noise block down converter according to claim 14, further comprising:

~~three~~ a third ground conductive layers, wherein, in the same levels as those in which said first and second ground

conductive layers ~~from above~~ are provided, a said dielectric layer is provided in at least part of a region that is closer to said waveguide than said antenna pattern is.